



EMIRATES PANEL MANUFACTURE LLC

Industrial Area 1, Umm Al Quwain
United Arab Emirates, UAE.

MATERIAL TEST REPORT

Application:

Signage, Interior Decoration

Sr. No.	TEST DETAIL	UNIT	STANDARD USED	RESULT	REMARKS
1	Product	--	--	Aluminium Composite Panel	
2	Brand Name	--	--	EPM	
	A. Physical Properties				
1	Core Type	--	--	LDPE CORE	Low Density Polyethylene
2	Length	mm	--	$<6000 \pm 4$	
3	Width	mm	--	$1220, 1250, 1500 \pm 2$	
4	Thickness of ACP	mm	--	$3-6 \pm 0.2$	
5	Thickness of Top Aluminum Coil	mm	--	$<0.30 \pm 0.02$	
6	Thickness of Bottom Aluminum Coil	mm	--	$<0.30 \pm 0.02$	
7	Weight of the Panel	Kg/M2	--	$3-6 \pm 0.2$	
	B. Mechanical Properties (For ACP)				
1	Tensile Strength	N/mm ²	ASTM E8	>25	
2	Flexural Strength	N/mm ²	ASTM D790	>80	
3	Flexural Elastic Modulus	N/mm ²	ISO 178	>10000	
4	Elongation	%	ASTM E8	≥ 6	
5	Peel Off Strength	N/mm	ASTM D 903	>10	
6	Shear strength by punch	N/mm ²	ASTM D732	>15	
	C. Mechanical Properties (For Skin)				
1	Tensile Strength	N/mm ²	ASTM E8	≥ 120	
2	Yeild Strength	N/mm ²	ASTM E8	>90	
3	Modulus of Elastisity	N/mm ²	ASTM E8	70000	
4	Elongation	%	ASTM E8	≥ 5	

	D. Paint Coating Properties				
1	Color/Shade	--	EPM Catalogue	as per order	
2	Coating	Type	--	PE, HDPE	
3	Thickness of Coating	µm	ASTM D1400	>15	
4	Pencil Hardness	B/H	ASTM 3363	H	
5	Impact Resistance	Kg/cm	ASTM D 2794	Pass	
6	Gloss @ 60°	%	ASTM D523	25-85	Depends on color
7	T-Bend Test	T	ASTM D4145	2T	
8	Adhesion (Cross hatch) dry and wet (50° C,20 min)	B	ASTM D3359	5B	
	E. Chemical Properties				
1	10% HCL, 10 Min.	--	ASTM D 1308	Pass No blister, creep, and no rust observed	
2	20% H2SO4, 10 Hrs.	--	ASTM D 1308		
3	5% NaOH, 48 Hrs.	--	ASTM D 1308		
4	20% HNO3, 30 Min.	--	ASTM D 1308		
5	Oil Resistance, 24 Hrs.	--	ASTM D2605		
6	Solvent Resistance (MEK)	DBR	ASTM D5402	>100, Pass	
7	Aluminium Alloy Chemical Composition				
	Mn	%	Spectro Test	0.05	EN-AW-1100, H16
	Mg	%	Spectro Test	0.01	
	Si	%	Spectro Test	0.32	
	Cu	%	Spectro Test	0.01	
	Fe	%	Spectro Test	0.33	
	Zn	%	Spectro Test	0.1	
	Al	%	Spectro Test	99.18	
	F. Thermal Properties				
1	Temperature Resistance	°C	ASTM C1363	-50 to +80	
2	Linear Thermal Expansion	mm/m @100°C	ASTM D696	2.4	
3	Heat Deflection Temperature	°C	ASTM C1363	>70	



For,
EMIRATES PANEL MANUFACTURE LLC.